

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P562254

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-81-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562254
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-1LO-50-UNV-81-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2364.0 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

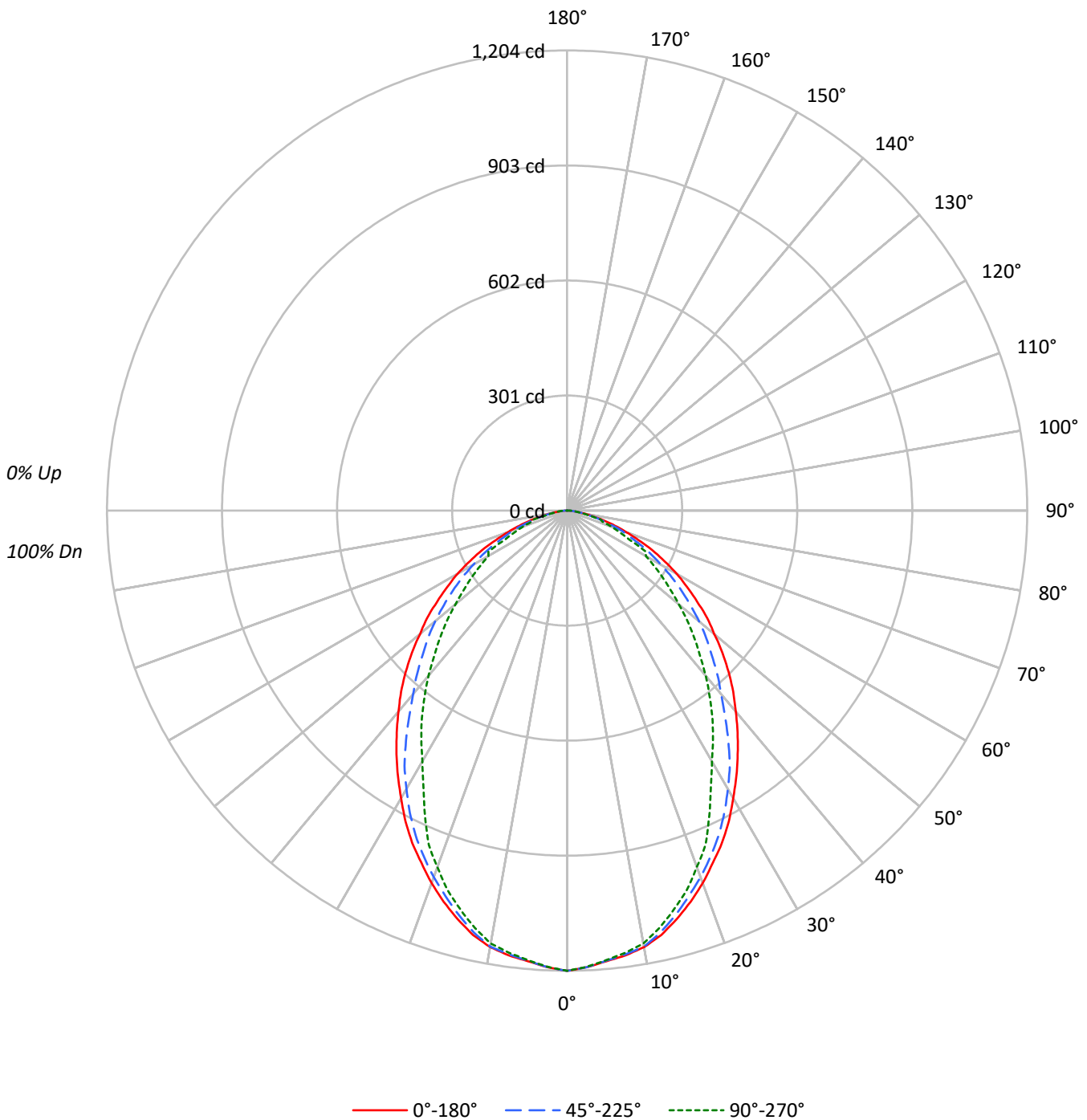
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									20									
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1620	1620	1620
5°	1598	1596	1594
10°	1584	1582	1571
15°	1542	1526	1505
20°	1485	1461	1421
25°	1424	1393	1306
30°	1350	1306	1177
35°	1278	1207	1089
40°	1205	1100	990
45°	1136	1017	895
50°	1052	944	798
55°	973	856	715
60°	892	764	641
65°	784	669	567
70°	646	586	482
75°	514	449	470
80°	345	324	302
85°	215	258	301

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1136 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.1	4.7
10°-20°	307.6	13.0
20°-30°	425.9	18.0
30°-40°	454.1	19.2
40°-50°	414.3	17.5
50°-60°	324.6	13.7
60°-70°	211.5	8.9
70°-80°	93.7	4.0
80°-90°	20.1	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	845.6	35.8
0°-40°	1299.8	55.0
0°-60°	2038.6	86.2
0°-90°	2364.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2364.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1204	1204	1204	1204	1204	
5°	1183	1182	1182	1180	1180	112
15°	1107	1107	1096	1084	1080	311
25°	959	954	938	905	880	440
35°	778	773	735	679	663	487
45°	597	585	535	490	470	460
55°	415	402	365	322	305	372
65°	246	232	210	214	178	243
75°	99	92	86	82	90	106
85°	14	15	17	18	20	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1204.2	1204.2	1204.2	1204.2	1204.2
2.5°	1195.8	1195.8	1195.8	1194.4	1194.4
5°	1183.3	1181.9	1181.9	1180.5	1180.5
7.5°	1173.6	1172.2	1170.8	1169.4	1166.6
10°	1159.6	1159.6	1158.2	1151.3	1149.9
12.5°	1137.4	1136.0	1130.4	1120.7	1117.9
15°	1106.7	1106.7	1095.6	1084.5	1080.3
17.5°	1073.3	1071.9	1058.0	1046.9	1041.3
20°	1037.1	1034.4	1020.4	1002.3	992.6
22.5°	996.8	996.8	980.1	956.4	946.6
25°	959.2	953.6	938.3	904.9	879.8
27.5°	916.0	907.7	891.0	843.6	814.4
30°	868.7	864.5	840.8	779.6	757.3
32.5°	824.1	817.2	792.1	728.1	710.0
35°	778.2	772.6	735.0	679.4	662.7
37.5°	732.3	725.3	678.0	633.4	612.5
40°	686.3	678.0	626.5	586.1	563.8
42.5°	643.2	632.0	581.9	538.8	513.7
45°	597.2	584.7	534.6	490.0	470.5
47.5°	551.3	540.1	494.2	448.3	426.0
50°	502.6	492.8	451.0	405.1	381.4
52.5°	462.2	446.9	406.5	360.6	341.1
55°	414.9	402.3	364.7	321.6	304.9
57.5°	371.7	359.2	324.4	284.0	270.1
60°	331.3	313.2	284.0	249.2	238.1
62.5°	286.8	272.9	247.8	218.6	232.5
65°	246.4	232.5	210.2	214.4	178.2
67.5°	201.9	194.9	175.4	155.9	150.3
70°	164.3	155.9	149.0	128.1	122.5
72.5°	130.9	122.5	112.8	101.6	97.4
75°	98.8	91.9	86.3	82.1	90.5
77.5°	68.2	65.4	61.3	57.1	55.7
80°	44.5	43.2	41.8	40.4	39.0
82.5°	26.5	26.5	26.5	26.5	26.5
85°	13.9	15.3	16.7	18.1	19.5
87.5°	8.4	8.4	9.7	11.1	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)